

ABSTRACT OF THE DISCLOSURE

Irrigation systems, moisture sensors and related methods having a sensor imbedded in the ground to sense moisture and help control watering. The sensor is responsive to capacitance changes from ground moisture variations. The sensor uses spaced insulated electrodes which are mounted within a granular filled chamber within a water-permeable shell. The sensor is mounted as part of a ground unit that also includes a high frequency driver that excites the sensor. The ground unit further has a detector circuit which produces a moisture indicating signal based on the capacitance which varies with ground moisture. Also disclosed are controllers that electrically isolate the ground units so that reliable moisture signals can be obtained and used to control irrigation. The controllers can be configured to provide multiple zone operation using a shared controller having shared or independent moisture adjusters.